



July 10, 2008

Dr. Leah Evison
U. S. EPA - Region 5 (SR-6J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

**Re: Sauget Area 2 Site – October 3, 2002 Unilateral Administrative Order
(UAO) Groundwater Operable Unit
Monthly Report; June 1 - June 30, 2008 Reporting Period**

Dear Dr. Evison:

Attached is the Monthly Report for the Sauget Area 2 Site October 3, 2002 Unilateral Administrative Order (UAO) - Groundwater Operable Unit. This submittal is in fulfillment of the monthly reporting requirements of the UAO, Section XII, paragraph 62, Progress Reports. This report is for the period June 1 – June 30, 2008.

Sincerely,

A handwritten signature in black ink, appearing to read "Steve Smith".

Steven D. Smith
Project Coordinator

cc: Ken Bardo, - U. S. EPA
Mayor Sauget - Sauget, IL
Sandra Bron – IEPA
Mike Coffey - USFWS
Village of Sauget – c/o P. H. Weis & Associates (Attn: Brian Nelson)
Mayor Frank Bergman – Cahokia
L. Glen Kurowski - Monsanto
Cathleen Bumb – Solutia
Linda Tape - Husch Blackwell Sanders, LLP
Richard Williams – Solutia

Sauget Area 2 Site - Sauget, Illinois

October 3, 2002 UAO – Groundwater Operable Unit

Status Report

Date of Report: July 10, 2008
Period Covered: June 1 - June 30, 2008

Work Performed During the Reporting Period

Site Work

- The grass on the site was mowed during the reporting period.
- No fishing signs were mounted in the northwestern and southwestern corners of the site. Enough vegetation was removed from the river bank to ensure clear sight lines to the signs from the river and the river bank.

Groundwater Treatment

- As agreed upon with USEPA, the Groundwater Migration Control System (GMCS) continues to be operated to maintain the total pumping rate equal to the computed inflow rate, based on the average of the gradients measured in the two existing pairs of piezometers located immediately upgradient of the Site R landfill. The system was operated in the above manner during the reporting period. However, with the exception of the first three days of the month, no pumping occurred during the month because of the high river stage. The average daily flow rates during the three days that the pumps operated were very low, all less than 50 gpm.

The signal from the flow meter at the discharge end of the system was lost on June 2nd. The problem was traced to a faulty surge module and this was replaced.

- The vault flood alarm on well EW-3 was tripped on June 11th. The vault was inspected and no water was present. The alarm was apparently triggered by tripping of the circuit breaker for the power feed to the well. The breaker was reset and the problem has not reoccurred.
- Over the past several months, ongoing problems have been experienced with piezometer pair PZ-8. This pair is used in the computation of the groundwater gradient immediately upgradient of the GMCS and, hence, in the computation of the inflow rate into the system. The cause of the problems was almost invariably

the presence of moisture in the surge protection module of the recorder. In order to permanently solve this problem, it was decided to raise the electronics modules of three of the four piezometer pairs upgradient of the GMCS above grade (the PZ-6, PZ-7, and PZ-8 pairs). The fourth pair (PZ-5) is not subject to inundation. Work began on this project in March and by the end of April the electronic modules for piezometers PZ-8U, PZ-8D, PZ-7D and PZ-6D had been raised above grade. The modules for piezometers PZ-7U and PZ-6U were raised on June 2nd.

- The signal from piezometer PZ-1N became erratic on May 30th. The problem was traced to a faulty surge suppressor that had apparently been damaged by storms the day before. The signal channel was switched to a new surge suppressor and this stabilized the signal. However, the problem reoccurred on June 1st and both the sensor and the surge module were replaced. The signal has been stable since.
- The sensor in piezometer PZ-6U was replaced on June 17th when the signal was lost.
- Because of concern about potential site flooding as a result of the high river stage, it was decided to remove the valve actuators from the extraction well valve vaults as a precautionary measure. These are the only components in the vaults that can be damaged by flooding. The actuator on EW-3 was removed on June 19th; however, it was decided to leave the other two in place when the prediction for the maximum river stage was significantly reduced. The actuator on EW-3 will be replaced early in July.
- The signal from piezometer PZ-4IN became erratic on June 23rd and the signal channel was shut down until the problem can be identified and repaired.
- Comments on various documents submitted to the Agency were received on February 12th. These documents include:
 - Three Technical Memorandums (TMs) for Interim Operating Periods (IOPs) 1, 2 and 3
 - Quarterly Groundwater Sampling Reports
 - Semi-Annual River Sampling Reports
 - Draft Extraction Well Step Test Memo
 - Draft Operations and Maintenance Plan
 - Draft Barrier Wall Completion Report

A meeting was held on April 29th to discuss these comments. The comments have been reviewed and the following documents are being prepared for submission to the Agency:

- An Annual Report covering the period between February 2006 and December 2007. This report was submitted on June 16th as scheduled.
- A Remedial Action Report which was submitted on May 28th.

- A Work Plan for computing the mass flux to the river sediments and surface water following construction of the Interim Remedy was submitted on March 17, 2008. The Work Plan was discussed at the April 29th meeting and the Agency requested that the proposed methodology be revised to compute the chemical flux entering the river, as opposed to the groundwater flux.
- Alternatives to the method currently used to compute the pumping rate (Darcy's Law) were also discussed at the April 29th meeting. A refinement to the currently used algorithm was proposed in a Technical Memorandum that was appended to the Annual Report submitted on June 16th.
- Second quarter 2008 groundwater samples were collected from the performance monitoring wells. Collection of surface water and sediment samples in the Mississippi River scheduled to occur in March was again postponed because of the high river stage. Collection of these samples will be rescheduled when the river stage declines sufficiently to ensure that groundwater is discharging to the river.
- Water level and pumping data for the reporting period are attached.

Schedule

The documents listed above will be used to establish that the Remedial Action at Site R is complete.

Submittals During Reporting Period

- An Annual Report for the GMCS operations during 2006 and 2007 was submitted on June 16th.
- The validated analytical results from the first quarter 2008 groundwater monitoring event were submitted on July 1st.

Work Scheduled for Next Reporting Period

- Continue operating the extraction system to maintain the total pumping rate equal to the computed inflow rate.
- Monitor the Mississippi River stage in order to determine an appropriate time for collection of the first 2008 semi-annual surface water and sediment samples and collect the samples when groundwater begins to discharge to the river.
- Analyze the second quarter 2008 groundwater samples from the performance monitoring wells.

PUMPING DATA

GROUNDWATER MIGRATION CONTROL SYSTEM

JUNE 2008 DAILY AVERAGE PUMPING RATES AND GROUNDWATER LEVELS

Date/Time		PUMPING RATE					SWL
		Computed Q	Total Q	EW-1 Q	EW-2 Q	EW-3 Q	
06/01/2008	Daily Average	0.73	2.81	0.00	2.81	0.00	403.54
06/02/2008	Daily Average	25.61	32.89	1.60	31.30	0.00	402.92
06/03/2008	Daily Average	41.17	35.91	0.00	35.91	0.00	403.50
06/04/2008	Daily Average	1.05	3.06	0.00	3.06	0.00	405.78
06/05/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	407.09
06/06/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	408.27
06/07/2008	Daily Average	0.00	2.92	1.28	1.63	0.00	409.75
06/08/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	409.90
06/09/2008	Daily Average	0.00	2.27	1.26	1.11	0.00	410.26
06/10/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	410.95
06/11/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	411.60
06/12/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	412.06
06/13/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	412.34
06/14/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	412.73
06/15/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	413.44
06/16/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	414.38
06/17/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	415.36
06/18/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	416.20
06/19/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	416.67
06/20/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	416.82
06/21/2008	Daily Average	0.00	4.74	1.71	1.53	1.50	416.94
06/22/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	416.81
06/23/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	416.86
06/24/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	417.07
06/25/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	417.14
06/26/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	417.16
06/27/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	417.37
06/28/2008	Daily Average	0.00	2.85	1.00	0.90	0.96	417.79
06/29/2008	Daily Average	0.00	2.83	0.93	0.96	0.95	418.17
06/30/2008	Daily Average	0.00	0.00	0.00	0.00	0.00	418.28

GROUNDWATER MIGRATION CONTROL SYSTEM

JUNE 2008 DAILY AVERAGE PUMPING RATES AND GROUNDWATER LEVELS

		GROUNDWATER LEVELS											
Date/Time		PZ-5U	PZ-5D	Delta	PZ-6U	PZ-6D	Delta	PZ-7U	PZ-7D	Delta	PZ-8U	PZ-8D	Delta
06/01/2008	Daily Average	402.59	402.62	0.03		402.56		402.75	402.60	-0.15	402.84	403.01	0.18
06/02/2008	Daily Average	402.57	402.50	-0.07		402.50		402.69	402.53	-0.16	402.75	402.85	0.11
06/03/2008	Daily Average	402.76	402.66	-0.11	402.87	402.60	-0.21	402.62	402.64	0.02	402.88	403.03	0.15
06/04/2008	Daily Average	402.93	403.01	0.09	402.98	402.76	-0.22	402.64	402.81	0.18	403.10	403.59	0.48
06/05/2008	Daily Average	403.14	403.31	0.17	403.18	402.94	-0.24	402.76	402.98	0.23	403.35	404.01	0.66
06/06/2008	Daily Average	403.37	403.62	0.25	403.36	403.12	-0.23	402.93	403.17	0.24	403.55	404.42	0.87
06/07/2008	Daily Average	403.85	404.20	0.34	403.79	403.56	-0.23	403.39	403.63	0.24	404.08	405.13	1.05
06/08/2008	Daily Average	404.18	404.51	0.33	404.09	403.90	-0.19	403.71	403.96	0.25	404.41	405.40	0.99
06/09/2008	Daily Average	404.31	404.68	0.36	404.20	404.05	-0.16	403.85	404.11	0.26	404.53	405.62	1.09
06/10/2008	Daily Average	404.41	404.85	0.44	404.26	404.14	-0.12	403.94	404.20	0.26	404.68	405.86	1.18
06/11/2008	Daily Average	404.62	405.13	0.50	404.46	404.36	-0.09	404.16	404.42	0.26	404.87	406.14	1.27
06/12/2008	Daily Average	404.85	405.33	0.48	404.60	404.55	-0.05	404.30	404.59	0.28	405.07	406.37	1.29
06/13/2008	Daily Average	405.02	405.57	0.55	404.68	404.64	-0.04	404.41	404.69	0.28	405.18	406.56	1.37
06/14/2008	Daily Average	405.38	406.02	0.64	404.91	404.91	0.01	404.62	404.92	0.29	405.39	406.77	1.37
06/15/2008	Daily Average	405.77	406.44	0.67	405.38	405.22	-0.17	404.90	405.20	0.29	405.64	407.11	1.47
06/16/2008	Daily Average	406.04	406.83	0.79		405.45		405.10	405.40	0.30	405.87	407.45	1.57
06/17/2008	Daily Average	406.37	407.24	0.86	405.96	405.69	-0.17	405.34	405.64	0.30	406.15	407.86	1.71
06/18/2008	Daily Average	406.76	407.73	0.97	406.17	406.08	-0.08	405.70	406.01	0.31	406.57	408.31	1.75
06/19/2008	Daily Average	407.09	408.04	0.95	406.41	406.33	-0.08	405.94	406.26	0.32	406.81	408.64	1.82
06/20/2008	Daily Average	407.19	408.20	1.02	406.54	406.49	-0.04	406.10	406.42	0.32	406.97	408.84	1.87
06/21/2008	Daily Average	407.36	408.38	1.02	406.75	406.68	-0.07	406.30	406.61	0.32	407.16	408.98	1.82
06/22/2008	Daily Average	407.58	408.50	0.92	406.86	406.85	-0.01	406.45	406.78	0.33	407.31	409.19	1.88
06/23/2008	Daily Average	407.59	408.55	0.96	406.95	406.89	-0.06	406.52	406.84	0.32	407.36	409.21	1.84
06/24/2008	Daily Average	407.68	408.66	0.98	407.02	406.99	-0.03	406.60	406.93	0.32	407.46	409.33	1.87
06/25/2008	Daily Average	407.77	408.83	1.07	407.21	407.19	-0.01	406.80	407.13	0.32	407.67	409.54	1.86
06/26/2008	Daily Average	407.89	408.93	1.04	407.32	407.31	-0.01	406.92	407.24	0.32	407.78	409.59	1.81
06/27/2008	Daily Average	408.03	409.05	1.02	407.43	407.42	-0.01	407.03	407.36	0.33	407.89	409.74	1.85
06/28/2008	Daily Average	408.13	409.19	1.06	407.48	407.50	0.02	407.09	407.43	0.34	407.95	409.88	1.93
06/29/2008	Daily Average	408.31	409.35	1.04	407.61	407.63	0.01	407.20	407.54	0.34	408.07	410.05	1.99
06/30/2008	Daily Average	408.40	409.42	1.02	407.66	407.66	-0.01	407.24	407.58	0.34	408.11	410.07	1.96

GROUNDWATER MIGRATION CONTROL SYSTEM

JUNE 2008 DAILY AVERAGE PUMPING RATES AND GROUNDWATER LEVELS

Date/Time		GROUNDWATER LEVELS							
		PZ-1_OUTSI	PZ-1_INSIDE	PZ-2_OUTSI	PZ-2_INSIDE	PZ-3_OUTSI	PZ-3_INSIDE	PZ-4_OUTSI	PZ-4_INSIDE
		DE		DE		DE		DE	
06/01/2008	Daily Average	402.61	401.27	402.40	402.77	402.40	401.95	402.98	401.96
06/02/2008	Daily Average	402.31		402.00	402.72	401.99	401.84	402.64	401.79
06/03/2008	Daily Average	402.72	401.42	402.58	402.82	402.55	401.91	403.00	401.65
06/04/2008	Daily Average	403.89	401.57	404.37	403.05	404.28	402.23	404.19	401.99
06/05/2008	Daily Average	404.70	401.74	405.55	403.26	405.39	402.47	405.03	402.29
06/06/2008	Daily Average	405.44	401.96	406.66	403.46	406.42	402.68	405.81	402.55
06/07/2008	Daily Average	406.45	402.44	407.98	403.92	407.72	403.18	406.65	403.07
06/08/2008	Daily Average	406.70	402.81	408.16	404.28	407.90	403.55	407.05	403.40
06/09/2008	Daily Average	406.98	402.98	408.57	404.45	408.26	403.70	407.16	403.54
06/10/2008	Daily Average	407.39	403.06	409.19	404.55	408.86	403.81	407.48	403.64
06/11/2008	Daily Average	407.87	403.32	409.79	404.76	409.43	404.07	408.11	403.87
06/12/2008	Daily Average	408.21	403.49	410.27	404.98	409.87	404.24	408.49	403.99
06/13/2008	Daily Average	408.51	403.63	410.55	405.09	410.17	404.37	408.74	404.05
06/14/2008	Daily Average	408.95	403.91	410.94	405.37	410.53	404.58	409.07	404.17
06/15/2008	Daily Average	409.55	404.27	411.60	405.70	411.16	404.90	409.54	404.31
06/16/2008	Daily Average	410.25	404.53	412.50	405.95	412.01	405.13	410.16	404.43
06/17/2008	Daily Average	410.94	404.82	413.42	406.22	412.88	405.41	410.77	404.50
06/18/2008	Daily Average	411.67	405.26	414.27	406.63	413.69	405.80	411.39	404.67
06/19/2008	Daily Average	411.99	405.52	414.67	406.89	414.10	406.07	411.77	404.66
06/20/2008	Daily Average	412.19	405.69	414.89	407.05	414.27	406.25	411.83	404.72
06/21/2008	Daily Average	412.38	405.89	414.98	407.25	414.40	406.45	412.07	
06/22/2008	Daily Average	412.39	405.98	414.90	407.42	414.35	406.58	412.25	
06/23/2008	Daily Average	412.40	406.09	414.93	407.50	414.38	406.67	412.31	
06/24/2008	Daily Average	412.59	406.20	415.19	407.55	414.61	406.74	412.49	
06/25/2008	Daily Average	412.69	406.38	415.27	407.75	414.70	406.94	412.60	
06/26/2008	Daily Average	412.67	406.50	415.23	407.86	414.68	407.06	412.69	
06/27/2008	Daily Average	412.91	406.61	415.47	407.98	414.92	407.17	412.86	
06/28/2008	Daily Average	413.20	406.75	415.83	408.11	415.31	407.27	413.14	
06/29/2008	Daily Average	413.50	406.83	416.23	408.20	415.64	407.42	413.43	
06/30/2008	Daily Average	413.59	406.91	416.35	408.25	415.80	407.45	413.51	